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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/553,457

10/17/2005

Thomas Bohm

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20874

7590

07/17/2008

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EXAMINER

KASTURE, DNYANESH G

ART UNIT

PAPER NUMBER

3746

MAIL DATE

DELIVERY MODE

07/17/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/553,457	Applicant(s) BOHM ET AL.	
	Examiner DNYANESH KASTURE	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

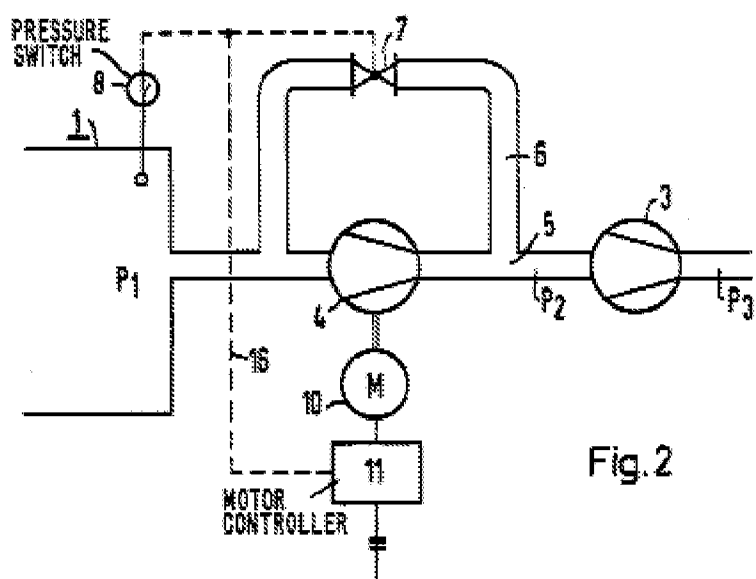
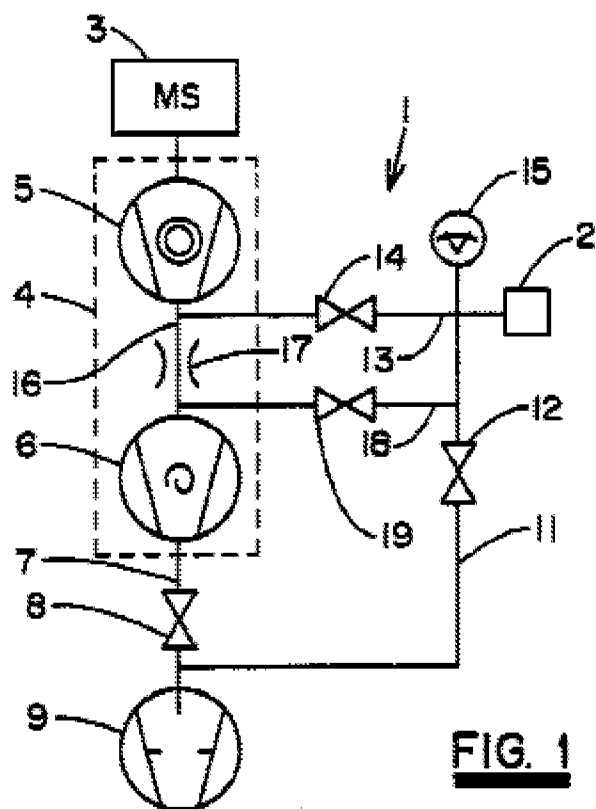
1. The previously made objections to the specification and title are hereby withdrawn in view of Applicants' amendments submitted on May 27, 2008.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grosse Bley et al (US Patent 5,585,548 A) and in view of Mugele et al (US Patent 4,225,288 A)



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4. In Re claim 5, with reference to Figure 1 depicted above, Grosse Bley et al discloses a Leak detector (Title) comprising:

- a “second” high vacuum pump (4) having an entry side which is connected to a mass spectrometer (3)
- a primary pump (9) having an entry side which is connected to the exit side (7) of the “second” (4) high vacuum pump and to the pressure gage (15)
- a “second” valve (12) provided between the pressure gage and the primary pump
- there are no throttles or valves between the means connecting the first high pressure gage (15) and the inlet of the leak detector (2)

5. However, Grosse Bley et al does not disclose a “first” vacuum pump having an entry side that is connected to the inlet of the leak detector and the exit side that is connected to the primary pump, a bypass with a “first” valve connecting the inlet of the leak detector to the primary pump, wherein the “first” high vacuum pump is connected to the inlet of the leak detector in a non-throttled manner without valving.

6. Nevertheless, with reference to Figure 2 depicted above, Mugele et al discloses a vacuum pumping system comprising:

- a “first” high vacuum pump (4) having an entry side which is inherently connected to a vacuum chamber (12) in a non-throttled manner without valving and the exit side is connected to the primary pump (3)
- a bypass (6) with “first” valve (7) connecting vacuum chamber (1) to the primary pump (3)

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7. It would have been obvious to a person having ordinary skill in the art at the time of the invention to:

- introduce a “first” high vacuum pump (4) as taught by Mugele et al at the connection to the chamber (2) of Grosse Bley et al in a non-throttled manner without valving, and
- include a bypass (6) with a “first” valve (7) as taught by Mugele et al between the connection to the chamber (2) and the primary pump (3) of Grosse Bley et al
- for the purpose of reducing power requirements for a given intake volume as stated by Mugele et al in Column 1, Lines 25-30

8. Note that that the device of Grosse Bley et al modified by Mugele et al has a “second” valve (8 of Grosse Bley et al) that remains closed until forevacuum pressure is reached after which it is opened, and Mugele et al states that the “first” vacuum pump is started only after a vacuum of 40 Torr is reached, therefore the “second” valve is “controlled” by opening it in response to the pressure at the inlet (forevacuum pressure) of the leak detector, also at which point the “first” vacuum pump is simultaneously started.

9. Alternatively Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grosse Bley et al (US Patent 5,585,548 A) in view of Mugele et al (US Patent 4,225,288 A) and as suggested by Becker (US Patent 3,520,176 A)

10. There is added suggestion for introducing the “first” vacuum pump of Mugele et al into the leak detector of Grosse Bley et al summarized above. The system of leak

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detection of Becker illustrates a “first” high vacuum pump (2) used in conjunction with a “second” high vacuum pump (4) connected to a mass spectrometer, where the exit sides of both (“first” and “second”) high vacuum pumps are connected to the entry side of the primary pump (3).

11. In Re claim 6, Grosse Bley et al discloses that “second” valve (8) is opened as soon as forevacuum pressure is reached - Column 3, Lines 35-36. Mugele et al discloses that the “first” high vacuum pump (4) is activated after sufficient vacuum has been achieved as stated in Column 3, Lines 14-22. Therefore, the “first” high vacuum pump is started simultaneously with the opening of the “second” valve.

12. In Re claim 7, Mugele et al discloses that the “first” high vacuum pump (4) is activated after sufficient vacuum has been achieved as stated in Column 3, Lines 14-22. The “first” valve (7) is kept open until the pressure falls to a vacuum of 40 Torr.

13. In Re claim 8, Grosse Bley et al discloses:

- a “second” high vacuum pump (4) with two stages (5) and (6)
- intermediate inlet (13) with valve (14)
- intermediate inlet (18) with valve (19)

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- Since the "first" vacuum pump is situated at connection (2) of Grosse Bley et al as suggested by the teachings of Mugele et al, the intermediate inlets are disposed between the exit side of the "first" vacuum pump and the "second" vacuum pump
- valves (14) and (19) are initially closed, and are "controlled" by opening them once forevacuum pressure has been attained (see column 3, lines 29-36). Since the pressure gage is next to the "first" vacuum pump in the modified apparatus, the pressure gage is reading the pressure at the exit of the "first" vacuum pump therefore, the valves are being dependently controlled based on the pressure of the exit side of the "first" high vacuum pump. Note that the pressure in the chamber is related to the pressure on the exit side of the "first" vacuum pump based on pump characteristics and mode of operation.

Response to Arguments

14. Applicant's arguments with respect to claims 5-8 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DNYANESH KASTURE whose telephone number is (571)270-3928. The examiner can normally be reached on Mon-Fri, 9:00 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on (571) 272 - 7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/
Supervisory Patent Examiner, Art
Unit 3746

DGK